Vital Statistics Indicator Rankings

Identifying key opportunities to improve the health of Michigan=s residents is aided by an assessment of mortality statistics collected via the death certificate. Two statistics, Leading Causes of Death and Years of Potential Life Lost (YPLL), provide important information to policy makers about interventions and initiatives directed at reducing the number of premature or preventable deaths.

Leading causes of death

Deaths due to the 10 leading causes account for more than 80 percent of all Michigan deaths. The rankings listed below are based on the number of deaths to Michigan residents. It may also be informative to look at the age-adjusted rate for the causes of death. Age-adjusting standardizes the population base in order to improve the comparability of rates between different populations. This allows comparison of Michigan data with other states, or within the state over time, so as to reflect true differences in death rates, as opposed to differences in the population=s age distribution.

Leading Causes of Death
Michigan Residents, 1998

Rank	Cause of Death	Number	Age-adjusted Rate[1]
1	Diseases of the Heart	27,851	137.9
2	Cancer	19,442	125.3
3	Stroke	5,760	25.9
4	Chronic Obstructive Pulmonary Disease and Allied Conditions	3,804	20.7
5	Unintentional Injuries	3,100	26.7
6	Pneumonia and Influenza	3,096	13.1
7	Diabetes (Underlying Cause of Death)	2,449	14.3
8	Kidney Disease	1,087	5.0
9	Chronic Liver Disease and Cirrhosis	981	8.0
10	Suicide	965	9.1

Source: Division for Vital Records and Health Statistics, MDCH
[1] Rate per 100,000 population (Age-adjusted to the 1940 US population)

Leading causes of Years of Potential Life Lost below age 75

Years of Potential Life Lost is a measure designed to emphasize mortality that is prevalent among persons under age 75. The number of years of potential life lost is calculated as the number of years between the age at death and 75 years of age for persons dying before their 75th year. For example,

YPLL for an individual who dies of cancer at age 50 is 25 years where as YPLL for the same disease is five years if the person died at age 70. The total number of YPLL per cause of death is presented in the third column in the following table and is the basis for the rank ordering.

Additionally, YPLL is informative when an average YPLL per person for each particular cause of death is calculated. This reveals, for example, that homicides represent the highest average YPLL per person while ranking fourth on total overall YPLL. Thus preventing a single homicide reduces the YPLL by almost 10 times as many years as preventing a death from heart disease.

Years of Potential Life Lost Below Age 75
Michigan Residents, 1998

Rank	Cause of Death	Number of YPLL	Rate[1]	Average YPLL/Person
1	Cancer	153,580	1,665.0	7.9
2	Diseases of the Heart	128,856	1,396.9	4.6
3	Unintentional Injuries	86,236	934.9	27.8
4	Homicide	32,590	353.3	42.4
5	Suicide	29,601	320.9	30.7
6	Stroke	21,426	232.3	3.7
7	Chronic Obstructive Pulmonary Diseases	16,878	183.0	4.4
8	Chronic Liver Disease and Cirrhosis	16,404	177.8	16.7
9	Diabetes (Underlying Cause of Death)	16,182	175.4	6.6
10	Pneumonia and Influenza	10,896	118.1	3.5

Source: Division for Vital Records and Health Statistics, MDCH
[1] Rate per 100,000 population below the age of 75 in 1997

In sum, Leading Causes of Death and YPLL are important measures for identifying targets for health improvements. Together they provide a comprehensive look at mortality in Michigan to support policy making and program planning.

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